AMENDMENTS TO THE SPECIFICATION:

Page 1, amend the first line as follows:

~~INTERNATIONAL SEARCH REPORT~~STRUCTURED LIGHT PROJECTOR

Page 10, amend the paragraph beginning at line 31 and continuing to page 11, line 2 as follows:

A structured light source generally indicated 2 according to the present invention is shown in figure 1. A light source 4 is located adjacent an input face of a kaleidoscope 6. At the other end is located a simple projection lens 8 for focusing an image at a first distance 7 and an unfocused image at a second distance 9. The projection lens is shown spaced from the kaleidoscope for the purposes of clarity but would generally be located adjacent the output face of the kaleidoscope.

Page 13, amend the paragraph beginning at line 6 as follows:

In one embodiment of the invention the light source is shaped so as to allow discrimination between adjacent spots. Where the light source is symmetric about the appropriate axes of reflection the spots produced by the system are effectively identical. However where a non symmetrically shaped source is used adjacent spots will be distinguishable mirror images of each other about the axes of reflection P and Q. The principle is illustrated in figure 3.

Page 15, amend the paragraph beginning at line 4 as follows:

Where multiple sources are used appropriate choice of shape or colour of the sources can give further discrimination. This is illustrated with respect to figure 5. Here a 2x2 array of

differently shaped sources, 52, 54, 56, 58 is illustrated along with a portion of the pattern produced 55. One can think of the resultant pattern formed as a tiled array of images of the input face 50 of the kaleidoscope with each adjacent tile being a mirror image of its neighbour about the appropriate axis. Looking just in the x-axis then the array will be built up by spots corresponding to LEDs 52 and 54 and followed by spots corresponding to their mirror images. The resultant pattern means that each spot is different from its next three nearest neighbours in each direction and ambiguity over which spot is being observed by a detector would be reduced.

Page 15, amend the paragraph beginning at line 22 as follows:

In a further embodiment lights sources are arranged at different depths within the kaleidoscope. The angular separation of adjacent beams from the kaleidoscope depends upon the ratio between the length and width of the kaleidoscope as discussed above. Figure 6 shows a square section kaleidoscope 66 and projection lens ~~68~~72. The kaleidoscope tube 66 is formed from two pieces of material 66a and 66b which may be clear optical glass or any other suitable material. A first LED 68 is located at the input face of the kaleidoscope as discussed above. A second LED 70 is located at a different depth within the kaleidoscope, between the two sections 66a and 66b of the kaleidoscope. The skilled person would be well aware of how to join the two sections 66a and 66b of kaleidoscope to ensure maximum efficiency and located the second LED 70 between the two sections.

Page 16, amend the paragraph beginning at line 1 as follows:

The resulting pattern 65 contains two grids with different periods with the grid corresponding to the second LED 70 partially obscuring the grid corresponding to the first LED 68. As can be seen the degree of separation between the two spots varies with distance from the

centre spot. The degree of separation or offset of the two grids could then be used to identify the spots uniquely. The LEDs 68, 70 could be different colours as described above to improve discrimination.

Page 16, amend the paragraph beginning at line 8 as follows:

Up until now the invention has been described with reference to producing discrete spots. The invention could be used to project continuous lines 75 onto the scene however. A light source comprising a strip running from one side of the input face to the other and located centrally would produce an array of continuous lines as shown in figure 7. Similarly a square grid could be produced by use of a cross-shaped light source as shown in figure 8.